Sperm Morphology and Comparison Morphometry Measurements of two Species of Bats, Molossus molossus and Molossops temminckii (Chiroptera: Molossidae)

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Abstract

Sperm morphology is considered a species-specific character and has been used as a tool in the classification of numerous mammalian taxa. Neotropical bats have been poorly studied, and important aspects on sperm morphology have not been elucidated. The aim of the present study was to describe and compare the sperm morphology and morphometry of *Molossus molossus* and *Molossops temminckii*. 14 adults specimens were analyzed from the Colección Mamíferos Lillo, Universidad Nacional de Tucumán: five *Molossus molossus* and nine *Molossops temminckii*. The epididymis were extracted and macerated in Farmer's solution, followed by a coloration with different stains. To carry out the description and morphometric analysis, microphotographs were taken under an optical, epifluorescence and scanning electron microscope. A total of 50 sperm from each individual were measured for morphometric analysis. The length and width of the head, midpiece and tail were taken as variables. Sperm from M. molossus and *M. temminckii* were practically identical, both morphologically and morphometrically. In both species, a distal bulge was observed at the end of the intermediate piece in a percentage greater than 85%. The main characteristics shared between the species were: presence of acrosomal blebs in the upper half of the head of the spermatozoa; cephalic equatorial segment with filiform ornamentations; intermembrane space of head apex wedge-shaped; helical middle piece and annulus at the end of middle piece. In the present study, scanning electron microscopy allowed us to visualize structures, such as acrosomal vesicles, that were not detected with other types of microscopy.

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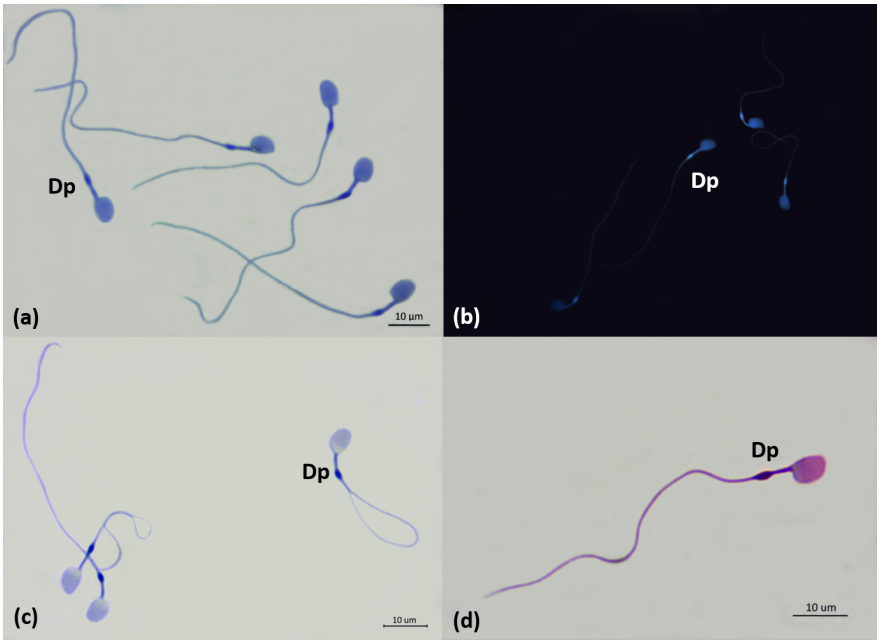

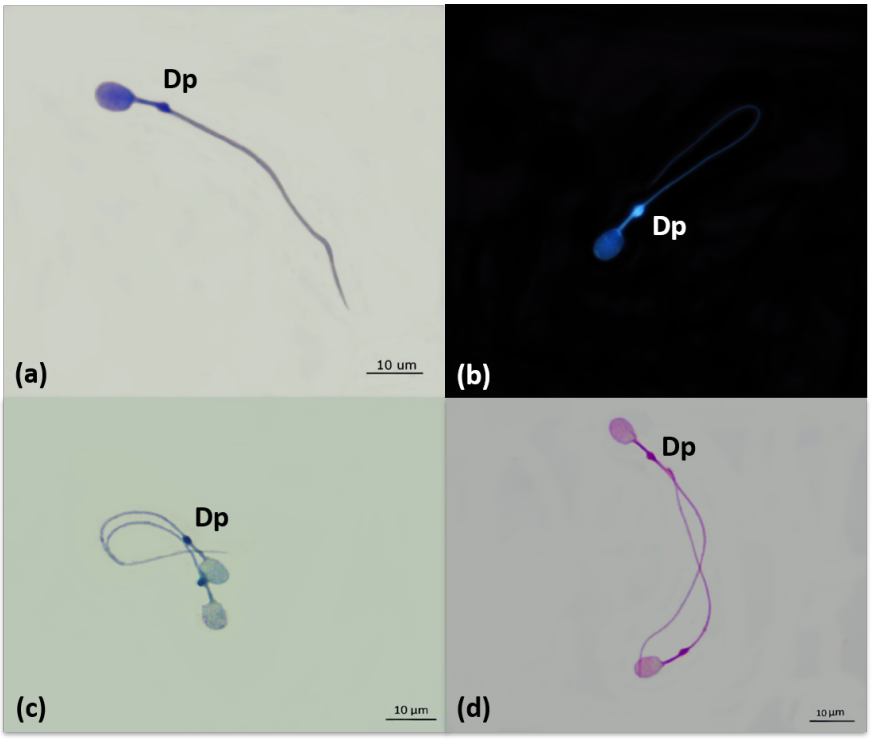

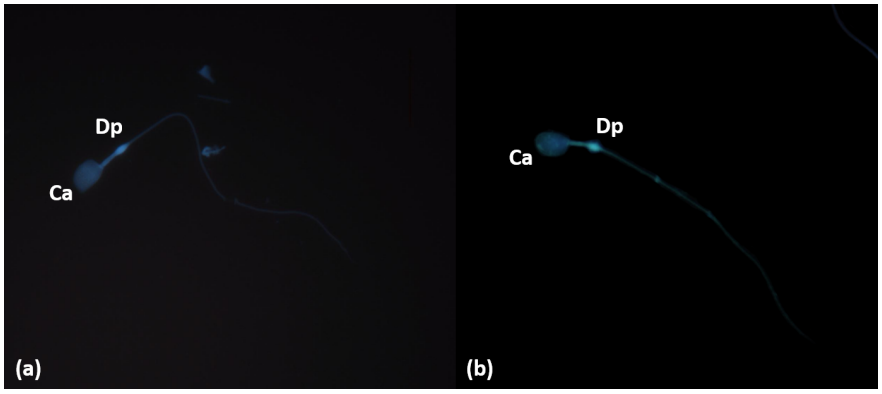

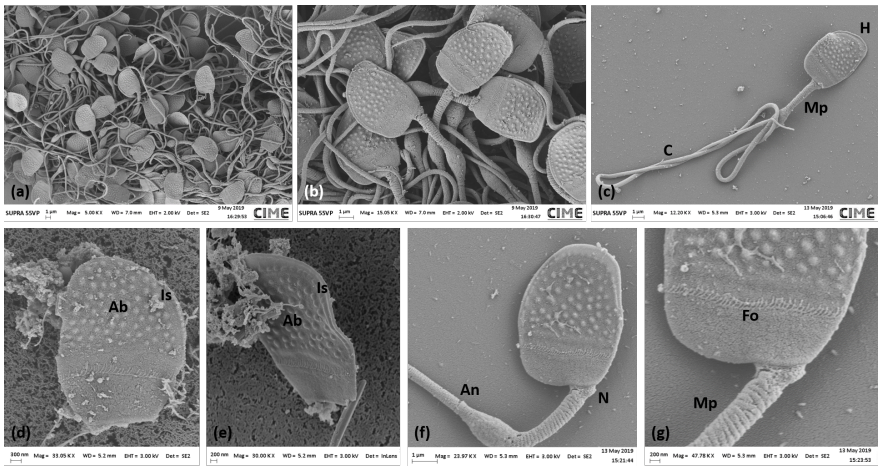

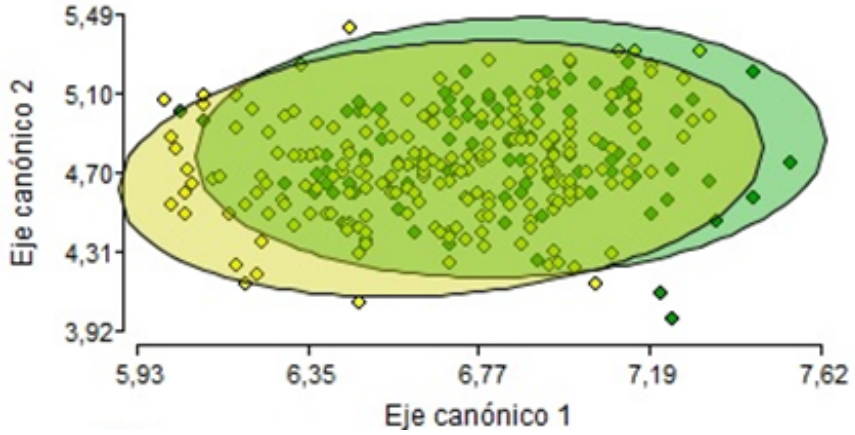

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